INSTITUTE OF PUBLIC HEALTH

COLLEGE OF MEDICINE AND HEALTH SCIENCES

UNIVERSITY OF GONDAR

Prevalence of self medication and its associated factors in Gondar town, North West Ethiopia, 2014

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☐ **Examiner**

DEDICATION

This paper is dedicated to my beloved mother w/ro Huluagerish Areaya.

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Acronym

AOR- Adjusted Odds Ratio

COR-Crude Odds Ratio

CI – Confidence Interval

CSA – Central Statistic Agency

OR – Odds Ratio

SM – Self-medication

SPSS- Statistical Package for Social Sciences

WHO – World Health Organization

Abstract

Background: WHO acknowledges the existence of a valid role of self-medication. However, there is potential misuse and abuse of self medication. Studies on factors influencing the use of self medication should be of interest to public health practitioners due to its possible deleterious effects. However, in Ethiopia there is a paucity of community based study which tried to identify the factors associated with self medication.

Objectives: The aim of this study was to determine the prevalence and associated factors of self medication among adult ill individuals in Gondar, Ethiopia, 2014.

Methods: Community based quantitative cross-sectional study design was conducted in Gondar town from March 16 to 30, 2014. The study included 1052 ill adult individuals through the past two weeks prior to the data collection time. The study participants were selected by using multi stage sampling technique. Data were collected using structured and pretested questionnaires and multivariate logistic regression analyses were done to identify factors associated with self-medication practice. Finally, results were presented with appropriate tables and graph as well as Adjusted odd ratio (AOR) and 95% confidence interval.

Findings: The prevalence of self-medication among ill adult individuals in Gondar town two weeks prior to the study was 34.9% (95% confidence Interval 31.9, 37.9). Age group of 24-44, educational status, divorced, widowed, self employed, house wives, duration of illness, severity of the illness, presence of chronic disease and good perceived general health status were found to be significantly associated with the practice of self-medication in two weeks recall period.

Conclusion: The prevalence of self medication in Gondar town was high. Self medication was higher among those, age group of 25 – 44, divorced, widowed, house wives, longer duration of illness, presence of chronic illness, perceived low severity of illness, and perceived good general health status.

Key words: Self medication, ill, Gondar town, Ethiopia

1. Introduction

1.1 Statement of the problem

It has been estimated 70% to 90% of all illness episodes are handled by some form of self-treatment and are not brought to the attention of a health professional. One form of self-treatment is self-medication (1). Self medication is defined as the use of drugs to treat self-diagnosed disorders or symptoms, or irregular or continued use of a prescribed drug for chronic or recurrent disease or symptom (2, 3). It is usually selected by consumers for symptoms that they regard as troublesome to require drug therapy without the consultation of a prescriber (3).

If done appropriately, self medication can readily relieve acute medical problems, can save the time spent in waiting to health institutions, may be economical and can even save lives in acute conditions (4). World Health Organization acknowledges the existence of a valid role of self-medication (5). In developing countries, where universal access to health care is yet to be achieved, self‑medication is one of the common and preferred modes resorted by the patients (6).

However, there is potential misuse and abuse of self medication. Many studies identified that the major potential risks of self medications are severe adverse reactions, incorrect self-diagnosis, dangerous drug interactions, delays in seeking medical advice when needed, incorrect dosage, incorrect manner of administration, incorrect choice of therapy, masking of a severe disease, and risk of dependence and drug abuse (3, 7-9).

Antimicrobials resistance is one of the major potential risk of self medication, which is a current problem globally particularly in developing countries, and might aggravate the emergence of multiple resistant organisms that would be difficult to treat and this has caused increased morbidity (3, 10).

Self-medication also accounts for about 2.9 - 3.7 % causes of death in hospitals as a result of drug-drug interactions (10).

Self-medication is one of health concerns worldwide and WHO has emphasis that self-medication must be correctly investigated and controlled (7). The practice has been that prescribe only drugs must be prescribed by a physician before purchase medicines. But this is not the case in Sub-Saharan African countries (8).

Because of there are few trained health professionals, cost of conventional drugs is very high for the low income group and traditional herbal medicines constitute almost 50 percent of the drug used for the treatment, the profile of self-medication in sub Saharan Africa countries is peculiar. So, self medication in this area is very dangerous (8).

Although few studies had been conducted to ascertain prevalence of self-medication and its reasons in Ethiopia, they were largely focused on descriptive study; and there is a paucity of community- based analytical studies on prevalence and its associated factors. In the investigator's knowledge 3 studies were conducted in Gondar. However, the two of them were institution based, which is not represent the whole community and the other community based was conducted before a decade which cannot be representative for the current situation.

1.2 Review of literature

1.2.1 Magnitude of the problem

Self medication is a global problem. Different studies admitted that self-medication is a growing problem. A review in concept of self medication showed that in developed countries like Switzerland, Italy, Sweden, Spain, United Kingdom, Germany, Australia and United States of America the prevalence of self-medication was range from 8 to 13% (11).

In developing countries, where universal access to health care is yet to be achieved, self‑medication is one of the common and preferred. Of this countries study conducted from 5 countries in Africa (Nigeria and Sudan)(3, 12), Asia (India, urban China) (13, 14)and Latin America (Mexico)(11) found a prevalence of 85%, 73.9%, 68%, 31.2%, 8% respectively.

Different studies were conducted in different areas of Ethiopia to ascertain the prevalence of self-medication. A community based cross sectional study conducted in Assendabo using Open-ended questionnaire to collect data by interviewing heads of households in previous two weeks of data collection period indicated that 11.4% reported at least 1 episode of illness and of whom 39% used self-medication. With similar study design and data collection method a study were also conducted in Gondar, which revealed that 11.6% reported at least one episode of an illness and of whom 27.5% conducted self-medication. Self-medication was conducted using both modern pharmaceuticals and traditional medicines (15).

A community based cross-sectional survey was also conducted in Jimma. It was on a sample of 352 households, which were selected systematically. Data was collected by structured and pre-tested questionnaire. Out of the ill people, 27.6% were self-medicated (16). A prospective study on self medication was also conducted in Addis Ababa which revealed the prevalence of 50% (17).

1.2.2 Factors associated with self-medication

1.2.2.1 Socio demographic factors

The socio demographic factors were age, sex, marital status, occupation, educational status, and number of family members. Different studies from the world showed that socio-demographics were significant factors that determine the practice of self-medication.

Most studies showed that there is significant association between female sex and self medication. A study from Bambuí female sex were significantly associated with self medication (OR=0.6; CI 95%=0.4 - 0.9) (18). And similarly a study from Sudan, which was conducted to estimate the prevalence of self medication with antibiotics and anti malarias, found that self medication was significantly associated with female sex (OR=1.8; 95% CI 1.4 -2.4) (19). A study from Spain also showed similar result (OR =1.48; 95% CI 1.34-1.64) (1). In contrast a survey conducted in Saudi Arabia on 500 patients attending primary health care to determine the prevalence and factors associated with self-medication practice showed that there were significant association between male sex and self medication (OR=3.56; 95%CI=2.15-5.89) (20).

Different studies showed that there were significant association between age and practice of self-medication. A study conducted in the Bambuí identified that age were a significant factors for practicing self-medication (OR=0.4; CI 95%=0.3 - 0.6 for 40-59 years old and OR= 0.2; CI 95%=0.1 - 0.5 for >60 years) (18). similarly self medication with any antibiotics or anti malarias was least common among the ≥ 60 years compared to youngest age group (OR= 0.07; 0.04 -0.11) (19). A study from Spain also revealed that there is positive association between age group of 25 – 44 (OR= 1.75; 95%CI 1.44 - 2.13) (1).

The study from Sudan revealed that there were significant association between self medication and educational status (OR= 0.25; 95% CI 0.14 – 0.46 for illiterate, 0.28; 95% CI 0.17 – 0.44 for primary school, OR= 0.41 95% CI 0.27 –

0.62 for intermediate school and OR= 0.41; 95% CI 0.26 – 0.67 for secondary school as compared to college graduates) (19). The same result was obtained from the study conducted in Portugal. Respondents with a higher educational level were more likely to use self-medication than those with a lower educational level (OR: 1.33; 95%CI1.06–1.65) (18).

Marital status was showed association in a study conducted in Nigeria. The Study was used semi structured questionnaire to collect data from 205 market women selected by multistage sampling technique. The pattern was descriptively associated with the marital status of the respondents (12).

And also self-medication occurred more often among employed citizens and students than among the retired, unemployed and housewives (OR: 1.59; 95%CI: 1.27–2.00) (21). A study conducted in India to assess the self-medication patterns and drug use behavior in housewives belonging to the middle income group revealed that; most of the housewives were in the habit of keeping the medicines and 73% of them were in the habit of using it without any prescription (22).

Number of family members was also showed significant association with self-medication practice in the some studies. A study from Bambuí revealed that >5 residents in the household was significant (OR=2.1; 1.1 - 4.0) association with self-medication) (18). According to a study in china, which measurement was based on the concept and data of the China National Health Survey 1993, 1998, 2003, and 2008, and covers 802,454 individuals; self treatment behavior was showed that number of family members was significantly associated with practice of self-medication (14).

1.2.2.2 Medical factors

Medical factors were severity of illness, duration of illness, presence of chronic disease and perceived health status. According to the study in china short duration illnesses (1–2 days) had higher probabilities of both using self-treatment

and seeking professional medical services than those with illnesses of 3–4 days, while those with illnesses for ≥ 5 days had a higher probability of seeking professional medical services only (14).

According to the study in Saudi Arabia respondents who perceived their health status as poor were about 2.5 times more likely to practice self-medication than those who perceived their health status as good (OR = 2.57, 95% CI: 1.66–3.99) (23).

There were many identified reasons by the respondents for using of self-medication. In many literatures the presence of low perceived severity of illness was found the main reason for self-medication (4-6, 11, 15, 16, 24-26). A study conducted in China showed that there were significant differences in the proportion choosing for self-treatment each year according to severity of their illness (14).

In terms of course of illness from similar study, a significantly greater proportion of chronically ill patients opted for self-treatment, relative to the other categories (14). People suffered with chronic illness not see a health professional most of the time for their illnesses as they learn to cope using self medication. They are understandably unwilling to submit to the inconvenience of visiting a doctor for what they rightly feel they can manage for themselves (11). It was reported that nearly six million Americans with self treated arthritis never saw a Doctor for their condition even with severe limitation of activities. This was also reported among migraine sufferers in Kenya where a study revealed that 56% did not attend health institutions and resorted to self medication (27). A study from Riyadh, Saudi Arabia also showed that respondents who reported having chronic conditions were 1.6 times more likely to self-medicate than those who did not (OR = 1.64, 95% CI: 1.03–2.62) (23).

1.2.2.3 Health care facilities condition factors

A study conducted in china tried to compare respondents living > 1 km from a medical institution with lived ≤ 1 km away showed that respondents living > 1km were more likely to self-treat or seek medical services than lived ≤ 1 km away (14).

1.2.2.4 Economic factor

Cross sectional based study was carried out in an urban slum community in India, to assess the prevalence and practice of self medication and its major determinants. The study revealed that positive significant association between low economic status and self-medication (4). By reviewing different literatures the investigator prepares the following conceptual framework.

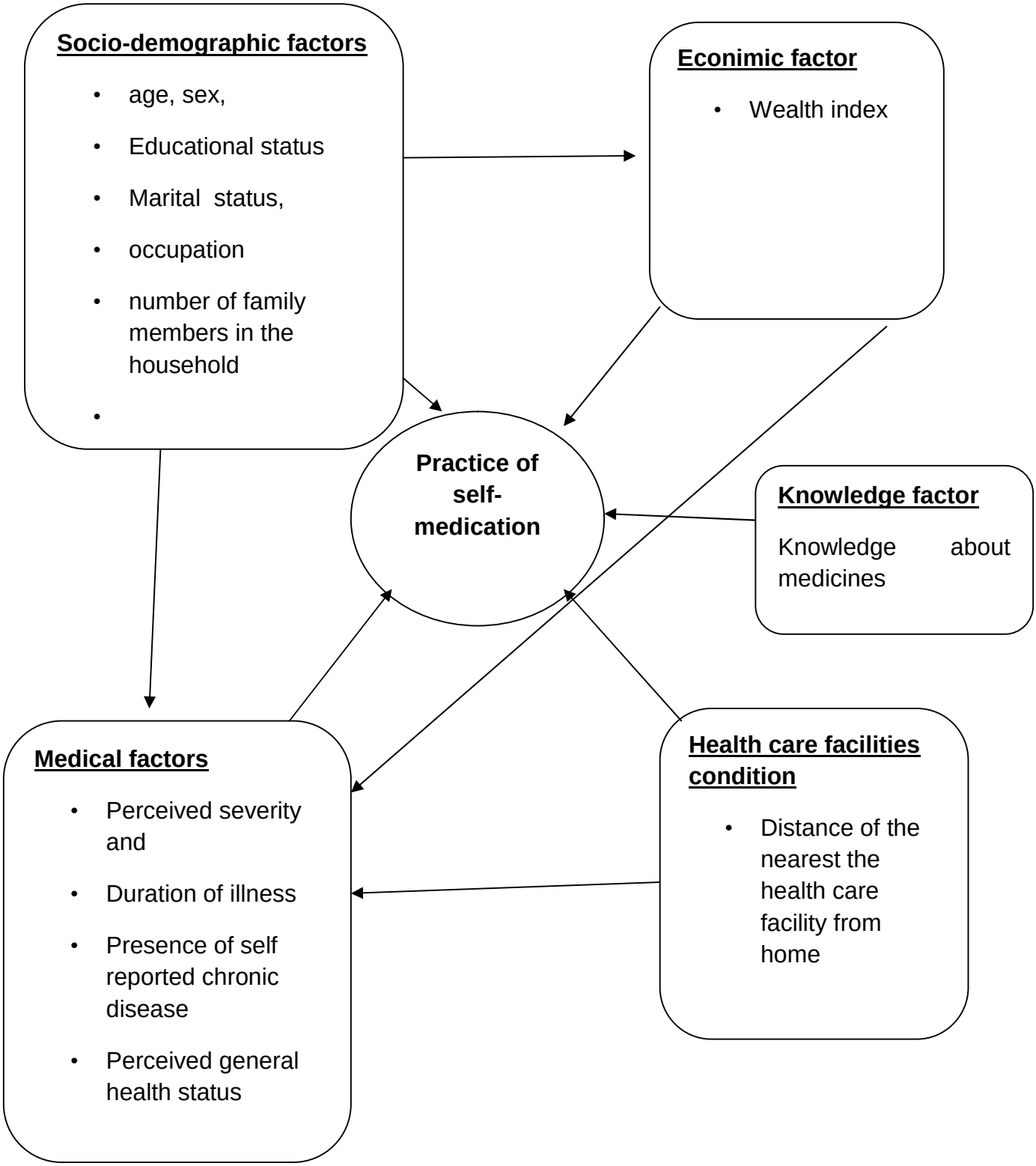


Fig. 1 Conceptual framework of self-medication

1.3 Justification of the study

Medicine consumption and epidemiological research on medicine use has become a major concern in society(28). Studies on factors influencing the use of self medication should be of interest to public health practitioners due to its possible deleterious effects (4).

Self-medication can be beneficial for patients, healthcare providers, the pharmaceutical industry and governments. However, it is also recognized that self-medication must be practiced by appropriate health information (4). Although self-medication is difficult to eliminate, intervention can be made to minimize the abnormal practice (29).

So this study may be used for

- to develop good regulation strategy to alleviate problems of self-medication
- Used as a tool for decision makers in the study area for evidence based intervention and
- Provide the current information about the prevalence and associated factors of self medication in the study area.

Therefore this population based study aimed at the determination of factors associated with self-medication and its magnitude.

2 Objectives

2.1 General objective

- The aim of this study was to assess the prevalence of self medication and its associated factors in Gondar town, Ethiopia, 2014

2.2 Specific objective

- To determine the prevalence of self medication
- To identify factors associated with self medication

3 Methods

3.1 Study design

Community based cross sectional study was employed to determine the prevalence of self-medication and its associated factors in Gondar town, North West Ethiopia.

3.2 Study area and period

This study was conducted in Gondar town from March 16 to 30, 2014. Gondar is located 750 kilo meters away from the capital city Addis Ababa. According to the recent administration system the town had 12 administration areas. The town has a latitude of $12^{o}36'N$ $37^{o}28'E$ with an elevation of 2133 meters above sea level. According to Central Statistical Authority (CSA) National Statistical Abstract report the population size of Gondar town in 2013 estimated 264964(125569 male and 139395 female) (30). The governmental institutions, which render health care services in the study area, are one referral hospital and 8 clinics in Gondar town.

3.3 Source and study population

The source population was permanent residents aged above 15 in Gondar town, North West Ethiopia and was ill in the last two weeks before the day of data collection. The study subjects were ill residents aged above 15 in the last two weeks before data collection and who were selected to be included in the study.

3.3.1 Inclusion criteria

Those ill individuals who were family member of permanent residents (live in the study area at least 6 months) and aged above 15 was included.

3.3.2 Exclusion criteria

For those verbal communication was impossible

3.4 Sample size determination

The sample size was calculated by using Epi info 7 statistical software assuming a confidence level of 95% and a 27.5 % prevalence (which was obtained from

the previous study conducted in Gondar town) (9) with margin of error 4 percent for the prevalence and the population size 139,761; which gives **478** sample size. Sample size was also calculated for associated factors [Table: 1].

Table 1: Sample size calculation for associated factors which is calculated by Epi info 7 (P- percentage of outcome for unexposed group)

Variables	Assumptions	Sample size
Duration of illness before seeking treatment	P- 41.9%,(31) power- 80%, CI- 95%, OR- 1.9 Ratio 1:1	334
Educational status	P- 40.38 (3), power- 80%, CI- 95%, OR- 2.3, Ratio 1:1	204

The largest sample size is 478. By considering design effect which is 2 and adding 10% non response rate the final sample size was 1052.

3.5 Sampling procedure

A multi-stage random sampling procedure was employed to select the study participants. At the first stage from the 12 administrative areas of Gondar 4 administrative areas (Mehal Arada, Cherkos, Maraki and Gebriel) were selected by using a lottery method. At the second stage a total of 1052 ill individuals in the last two weeks before data collection were selected randomly using systematic random sampling. The number of ill individuals in the last two weeks in each of the selected administrative areas was estimated (4,779) by using the prevalence of illness (11.7%) from the previous study conducted in Gondar town.(9) The sample taken from each of selected administrative areas was determined by using proportional allocation. To calculate the sampling fraction, the number of ill individuals in the last two weeks from the selected administrative areas (which was estimated to be 4,779) was divided by the sample size (1,052) and gives 4. After identified the initial ill individuals in the last two weeks by

lottery method from 1 to 4 (which was 3), the next was selected every 4^{th} ill individuals in the last two weeks [Figure 2].

When an ill individual in the last two weeks was not available at the time of interview, a second and third visit was made in the next 2 days. If not found again, the next ill individual in the last two weeks was included.

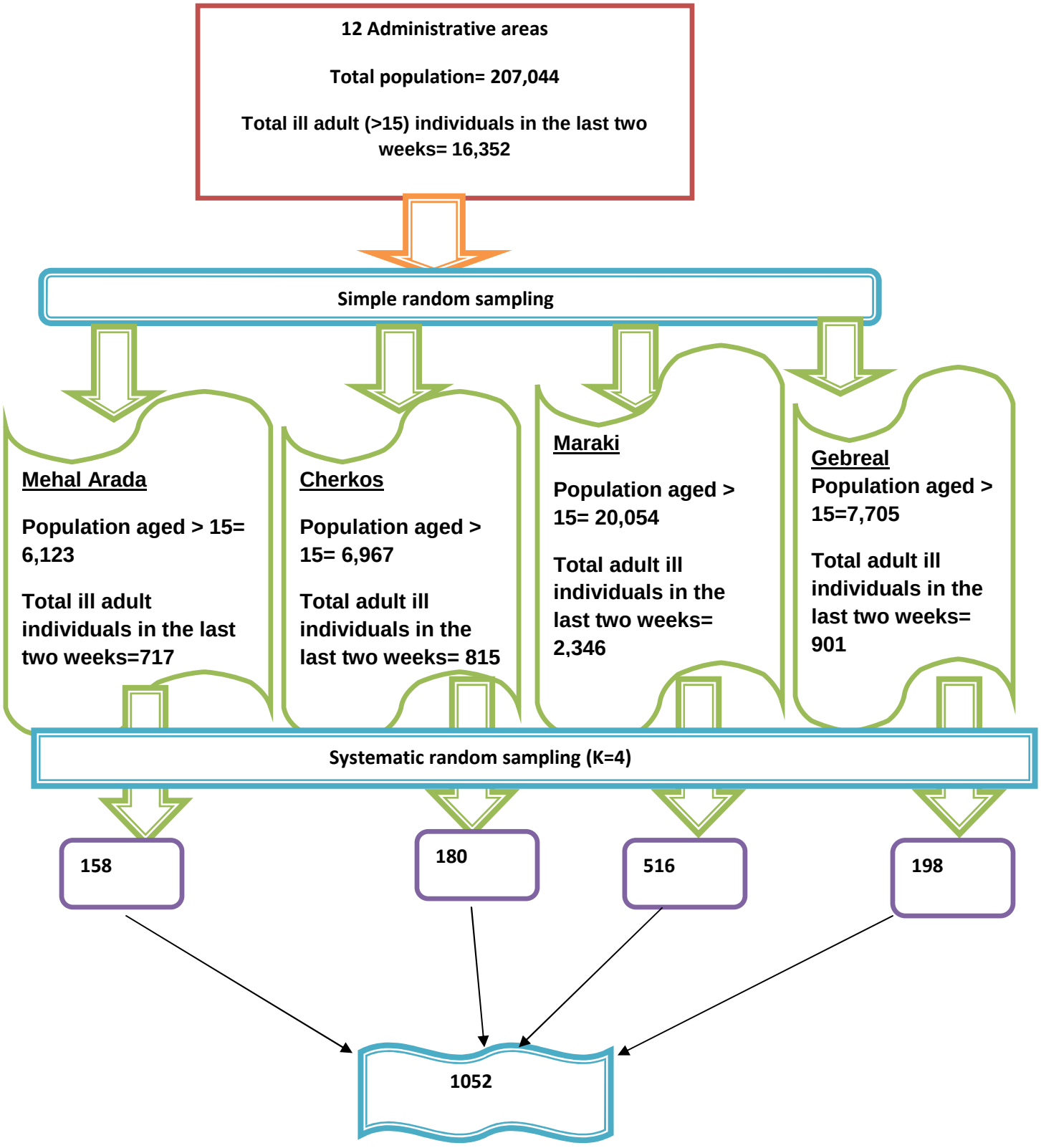


Fig. 2 Schematic presentation of sampling procedure

3.6 Data collection instrument and procedure

A structured interviewer-administered questionnaire by reviewing different literatures was prepared by the investigator and was used as a data collection instrument. The questionnaire was consists of 6 parts which had data on socio demographic characteristics, self-medication practice, medical factors, health care facilities conditions, economic factor and knowledge factor.

The first section was about socio demographic characteristics, including age, sex, ethnicity, religion, marital status, educational status, occupation and number of family members. The second section was used to measure the dependent variable which was self-medication. The measurement of the dependent variables was based on the operational definition used for the study. The third section was also used to collect information on medical aspect of the study subjects; such as perceived severity of illness, duration of illness, presence of self reported chronic illness and perceived health status of the study subjects. The fourth section included the health facilities condition which asked about the distance of the nearest health care facility from the study participant's home. The fifth section of the questionnaire was used to assess the wealth index. 20 questions about the presence of different assets and social statuses for urban inhabitants were included. Finally this factor was categorized in to three groups by performing principal component analysis. The six and the last part was about assessing knowledge of medicines. To measure the level of the knowledge 21 questions were prepared by the investigator. The mean score was using as a cut point to categorize having good knowledge or poor knowledge.

One supervisor who had masters degree in clinical pharmacology and 9 data collectors who were clinical nurse diploma holders were recruited and trained intensively for two days on interview techniques, sampling procedure, inclusion and exclusion criteria, sources and reduction of errors before the actual data collection period and used for the data collection.

3.7 Variables of the study

3.7.1 Dependent variable

Self-medication practice

3.7.2 Independent variables

Socio demographic variables: - Age, Sex, Marital status, Occupation, Educational status, Number of family members.

Medical factors: - Perceived Severity of illness, Duration of illness, presence of self-reported chronic illness and perceived health status

Economic factor: - Wealth index

Health care facilities condition: - Distance of the nearest health care service from home

Knowledge factor: - knowledge about medicines

3.8 Operational definitions

Self medication: - "is the use of traditional medicines and/or modern drugs without consulting qualified health practitioners. Under traditional medicines the use of homemade remedy and treatment obtained by consulting traditional healers were included.

The use of diet, holy water ("Tsebel"), and other non- pharmacological approaches such as massage, exercises, and psychotherapy was not considered as self-medication." which was obtained from study conducted in Gondar.(9)

Qualified health practitioner: - is an individual that was certified in Medical doctor, nursing or health officer profession; and provides preventive, curative, and promotional or rehabilitation health care service in a systematic way to individuals, families or communities.

Ill: - suffering from an illness or feeling unwell.

Illness: - period of sickness affecting the body.

Good knowledge about medicine: - an individual scores above the mean.

Poor knowledge about medicine: - an individual score lower the mean.

3.9 Data quality assurance

The questionnaire was prepared in English and translated to local language Amharic and back to English to keep the consistency of the questions and increase understanding of respondents. It was performed by 2 linguistic teachers.

Training of data collectors and supervisors and pre testing of questionnaire was made to check for ambiguity and sequencing of questions, prior to the actual data collection time.

In addition, the completeness, accuracy and consistency of the collected data were checked on daily basis during the data collection time, by the principal investigator and trained supervisor.

3.10 Data management and analysis procedure

Data was checked, entered and cleaned using Epi-info version 7 statistical software and then transferred to SPSS (Statistical Package for Social Science) version 20 for further analysis by principal investigator. Descriptive statistics of the collected data were done for most variables in the study using statistical measurements. Cross tabulation frequency tables, chart, graph, texts, percentages, mean and standard deviation were used to describe the data. The prevalence of self medication was reported as percentages. All variables were fitted to multivariate logistic regression for controlling the possible effect of confounders and finally the variables which have significant association were identified on the basis of Adjusted Odds Ratio (AOR), with 95%CI and 0.05 p-values. The method was backward logistic regression and variables having p-value of less than 0.05 were considered as significantly associated with the dependent variable. The fit of the model was assessed using the hosmer-Lemeshow goodness-of-fit test. Different assumptions of multivariate logistic regression were also checked.

4. Ethical consideration

Ethical clearance was obtained from Research Ethical Review Committee of Institute of Public Health of University of Gondar. Permission letter was also obtained from Gondar town administration office, health office and respective administration offices. Then, the selected adults (18 years of age and above) were informed about the purpose of the study, the importance of their participation, and the right to withdraw at any time. And verbal consent was obtained prior to data collection. And for those selected study subjects from 16 up to 17 years of age child assent and parental permission was obtained from their parents and the child prior to the data collection. Privacy and confidentiality of information given by each respondent kept properly and name was not recorded. And the recorded data was kept in a secured place with strict confidentiality.

5. Results

The survey included 1052 ill individuals in the last two weeks before data collection time, among these 53 (5.04%) refused to participate in the study. Fourteen questionnaires found to be incomplete and excluded from the analysis.

5.1 Socio-demographic characteristics

A sample of 985(93.63%) respondents was interviewed. More than half of the respondents (63.2%) were females. The mean age of respondents was 36.99 (S.D $\pm$ 18.3). The majority, 394(40%) were in age group of 25 to 44 years. Most of the respondents 331(33.6%) had secondary school education (Grade 9- Grade 12) and 278 (28.2%) had primary education. Orthodox Christianity (74.4%) was the major religion followed by Islam (23.8), and the majority of the respondents were Amhara (93.9%). Of the respondents 322 (32.7%) were students and 189 (19.2%) were self employed [Table 2].

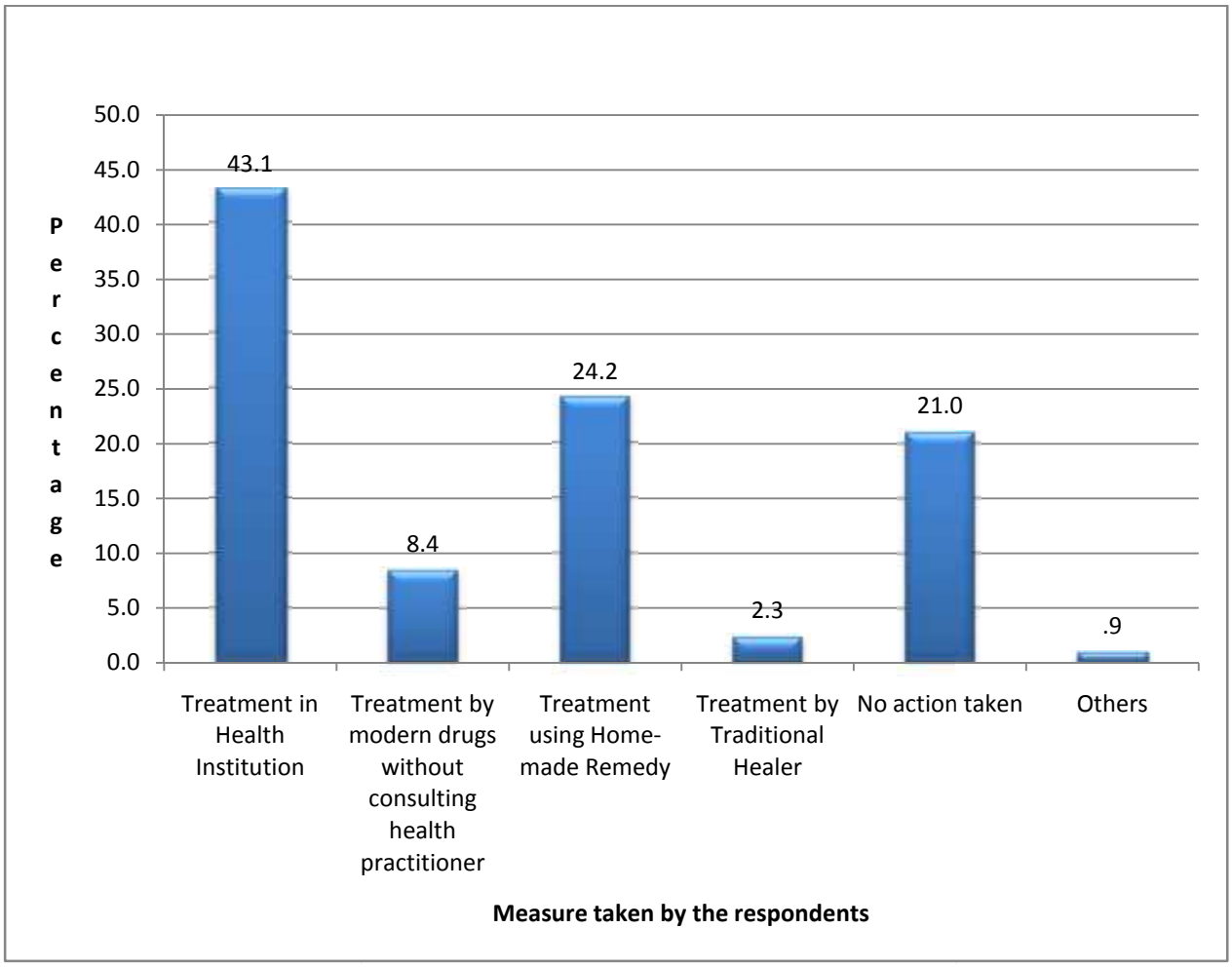
Table 2: Socio-demographic characteristics of the respondents (n-985) Gondar town, North West Ethiopia, March 15 to 30, 2014

Characteristics	Frequency	Percent
Age		
16 – 24	303	30.8
25 – 44	394	40
45 – 64	197	20
65 – 74	49	5
75 and above	42	4.3
Sex		
Male	362	36.8
Female	623	63.2
Religion		
Orthodox	733	74.4
Muslim	234	23.8
Protestant	11	1.1
Others*	7	0.7
Ethnicity		
Amhara	925	93.9
Tigrie	55	5.6
Oromo	5	0.5
Marital status		
Single	467	47.4
Married	322	32.7
Divorce	142	14.4
Widowed	54	5.5
Education		
No formal education	238	24.2
primary school	278	28.2
Secondary school	331	33.6
College and above	138	14
Occupation		
Student	339	34.4
Unemployed	140	14.2
Self-employed	227	23
Government employees	68	6.9
Non-government employee	12	1.2
House maid	9	0.9
Housewife	190	19.3

Others* religion: Catholics 4 (0.4%), Hawariat 3 (0.3%)

5.2 Practice of self medication

The main reported measure taken by the respondents to treat their illness was treatment in health institution 425 (43.1%) and followed by treatment using home-made remedy 238 (24.2%) [Figure 3].



Others*: Holly water (9)

Fig.3 The measure taken by ill individuals (n-985) in Gondar town, North West Ethiopia, March 15 to 30, 2014

Among the measures taken by the ill individuals, those fulfill the operational definition of self medication in this thesis were treatment by modern drugs without consulting health practitioner, treatment using home-made remedy and treatment by traditional healer. So by summing up these responses, from the total 985 study participants the prevalence of self-medication was 34.9% (95% CI: 31.9, 37.9).

5.3 Factors associated with self-medication

Table 4 provides the adjusted OR and 95% CI that quantify the association between the independent variables and the outcome variable (self-medication practice). These estimates were obtained using the multivariable logistic regression analysis.

Among the socio-demographic variables, age, educational level, marital status and occupation were statistically associated with self-medication. Age group of 25-44 respondents were about almost three times more likely to practice self medication than age group of 75 and above (AOR= 2.814, 95% CI: 1.221-6.483). Respondents having no formal education (AOR= 0.469, 95% CI: 0.256-0.086), primary education (AOR=0.420, 95% CI: 0.249-0.709) and secondary school (AOR=0.438, 95% CI: 0.261-0.733) were 53.1%, 58% and 56.2% less likely to practice self-medication as compared to respondents having college and above educational status respectively.

Medical-related factors conducted in the study were found to be statistically associated with self-medication. In particular, 1- 7 days duration of illness (OR= 3.453, 95%CI: 1.855-6.431), 8 days and above (AOR= 4.841, 95%CI: 2.424-9.669) are more likely to practice self-medication as compared to within 24 hours. And also respondents report perceived severity of the illness as poor were about 2.8 times more likely to practice self-medication than those who perceived the severity of the illness as high (AOR = 2.767, 95% CI: (1.64-4.66). Respondents who reported having chronic conditions were 1.6 times more likely to self-medicate than those who did not (AOR = 1.611, 95% CI: 1.161-2.234). Respondents who perceived their health status as good were about 2.7 times

more likely to practice self-medication than those who perceived their health status as poor (AOR = 2.767, 95% CI: 1.64-4.66) [Table: 4]. The other variables, which were distance of the nearest health care facility, wealth index and knowledge about medicine, were removed in the iteration process of backward logistic regression method.

Table 4: Multivariate logistic regression analysis for potential factors associated with practice of self-medication in Gondar town, 2014

Variables	Self-medication		Crude OR(95%CI)	Adjusted OR(95%CI)	P-value
	Yes	No			
Age					<0.001
16-24	88	215	0.665(0.34-1.3)	1.842(0.733-4.625)	
25-44	184	210	1.424(0.741-2.737)	**2.814(1.22-6.483)***	
45-64	34	163	0.339(0.164-0.699)	0.694(0.299-1.613)	
65-74	22	27	1.324(0.572-3.065)	1.328(.530-3.326)	
75 and above	16	26	1	1	
Educational status					
No formal education	96	142	0.568 (0.372-0.867)	**0.469(0.256-.086)***	
Primary education	90	188	0.402(0.265-0.611)	**0.420(0.249-0.71)****	
Secondary school	83	248	0.281(0.185-0.427)	**0.438(0.26-0.733)****	
College and above	73	63	1	1	
Marital status					<0.001
Single	146	321	1	1	
Married	91	231	0.866(0.634-1.183)	0.836(.515-1.356)	
Divorced	78	64	2.68(1.825-3.934)	**2.329(1.245-4.357)****	
Widowed	29	25	2.55(1.443-4.508)	**2.443(1.046-5.707**)*	
Occupation					<0.001
Student	82	257	1	1	
Unemployed	47	93	1.584(1.03-2.435)	1.416(.885-2.267)	
Self employed	101	126	2.512(1.751-3.605)	**1.854(1.106-3.106)***	
Government employee	14	54	0.813(0.429-1.538)	0.497(0.220-1.122)	
House wife	91	99	2.881(1.974-4.204)	**3.163(1.72-5.82)****	
Others*	9	12	2.351(0.956-5.778)	1.913(0.686-5.334)	
Duration of illness					
Within 24 hours	14	95	1	1	
1-7 days	260	437	4.037(2.257-7.223)	**3.453(1.855-6.43)****	
8 days and above	70	109	4.358(2.306-8.234)	**4.841(2.424-9.67)****	
Perceived severity of illness					
High	86	246	1	1	
Medium	166	287	1.654(1.212-2.258)	**1.717(1.194-2.47)****	
Low	92	108	2.437(1.681-3.531)	**2.809(1.8-4.377)****	
Chronic disease					
No	199	430	1	1	
Yes	145	211	1.485(1.133-1.945)	**1.611(1.161-2.234)****	
Perceived general health status					<0.001
Good	160	213	2.441(1.594-3.738)	**2.767(1.64-4.66)****	
Medium	148	311	1.547(1.014-2.358)	1.465(0.887-2.420)	
Poor	36	117	1	1	

Note: 1= Reference **, =p<0.001, * =p<0.05, Others* = house maid or nongovernmental employee

6. Discussion

In developing countries like Ethiopia, where universal access to health care is yet to be achieved, self-medication is one of the common and preferred modes resorted by the patients (6).

In this study the prevalence of self medication was found to be 34.9%. This is attributed to the inclusion of herbs and home-made remedies as a means of self-medication. The prevalence of this study was higher than a study conducted in Jimma 27.6 % (16) but lower than a study from Assendabo 39% (15) and Addis Ababa 50% (17). When it was compared to the previous study conducted in Gondar, it was higher. This could be explained by through time the practice of self-medication was increasing.

Without taking economic and social conditions into account there are three main health care scenarios: First, if there is a surplus of professional medical services compared with demands of medical care, the professional medical services use growth rate would be faster than that of self-medication. Second, if there is a relative balance between supply and demand, the growth rate of both would remain at a steady level. Third, if there is a scarcity in professional medical services, the self-medication growth rate may be faster (14). According to this study finding, the study area fits into the third scenario.

Different studies admit that comparing the prevalence of self-medication was difficult due to the difference in operational definition of self-medication, the recall period and seasonal variation (3, 32, 33). However, there is a general agreement among these studies that self-medication has potential risks and that even if efforts had been exercised by health care professionals and decision-makers to limit this problem, rates of self-medication are on the rise.

Things may be worse in Sub Saharan Africa. In sub-Saharan countries the practice of self-medication is peculiar. First, the proportion of trained physicians

to the society is extremely low, thus the people live in this area are resorted to self-medication. Secondly, the costs of the drug in this area are unaffordable for the low income groups. Thirdly, traditional herbal medicines are not scientifically well known. And almost 50% of peoples used these traditional medicines. In the name of traditional medicine peoples in Sub-Saharan African take “anything”, even potentially toxic substances like kerosene with sugar, petrol, etc (8).So self-medication in this area including Ethiopia could be extremely dangerous.

This is the first community based study, to the investigator’s knowledge, identifying the associated factors of self-medication in Gondar. Even if there is growing research interest in self-medication, little information has been available about the associated factors (27). This study tried to see the association between socio-demographic factors and the practice of self-medication. Among those variables age group of 25-44 was significantly associated with the practice of self-medication. This finding is consistent with other studies (1, 3). This may be due to this age group is a productive age group. Most of them devoted their time to work. So they may face shortage of time to go to the health institutions. Since prescription drugs are easily available without prescription in developing countries like Ethiopia, then, this age group may think that it is better to go to the pharmacy and buy some medicine rather than to health institutions.

Educational status was also found the significant factor for self-medication. The practice of self medication was decrease with the lower educational status as compared to the college and above. This result is in line with different studies (1, 3, 18).

From occupation statuses the practice of self medication was significantly higher in housewives as compared to students. This may be due to that most of the housewives had the habit of keeping the medicines at home. A study from India showed that among the stored medicines in the house 73% of housewives were

in the habit of using it without any prescription (22). The result of this study was in contrary to a study conducted in Portugal (21).

The other socio-demographic factor that showed significant association was marital status. This study demonstrated that there was higher prevalence of self-medication among Divorced and widowed. From a large number of potential life events, divorce and widowed has been rated as one of the most stressful experiencing negative life events like physical and psychological illness (34). So this may lead to unwise decision in the life events.

Number of family members in the household were failed to associate with the practice of self-medication. A study from Bambuí showed that >5 residents in the household was significantly association with self-medication (18). And also according to a study in china, self treatment behavior was showed that number of family members was significantly associated with practice of self-medication (14). The difference might be explained by the difference in sample selection, the measurement timeframe and the methods in particular can influence study results.

Almost all medical factors in the study were significantly associated with the practice of self-medication. Duration of illness was one of the factors showed significant association. According to this study when the duration of illness was increases, the tendency of self-medication was also increases. This finding was in line with other unpublished study from Bahirdar, Ethiopia(31). And different from the study in china which was: short duration illnesses had higher probabilities of both using self-treatment, while those with illnesses for ≥ 5 days had a higher probability of seeking professional medical services only (14). This could be explained by in Ethiopia longer duration of illness was treated by self medication rather they should get the attention of appropriate health care providers for further medical care.

From many literatures that try to measure different topics in self medication, it was identified that: low severity of the illness was the major reason to self-medication (4-6, 11, 15, 16, 24-26). And the other study which tried to determine the factors associated also revealed that severity of the illness was the major determinant of self-medication (14). The result of this study was the same with the above studies. The relationship between severity of illness and self-medication may be explained by high severity of the illness get the medical attention than lower severity. In other words; individuals perceive their severity of illness is minor are more likely to self-medicate than perceive the severity high.

Presence of chronic illness was one of the significant factors of the practice of self-medication, which showed positive association. The same result was obtained from other studies (14, 32). This result is supported by studies from America and Kenya showed that people with different chronic illness were rarely seeing a doctor. The association could be explained by that people with chronic illness may think that they have sufficient knowledge about the drugs and wish to take a greater role in the maintenance of their own health and are often competent to manage their illness.

Good perceived general health status was positively associated with the practice of self-medication. This result is in contrary to a study in Saudi Arabia found poor health status was more likely to practice self-medication (32). But it is convincing that an individual with perceiving his/her health status is poor may think that “if I don’t see a doctor it may lead to further complications”. And an individual perceiving his/her health status good may undermine the effect of illness and could practice self-medication.

7. Limitation of the study

- This study conducted in urban setting which cannot generalized to rural area.
- The previous experience of self-medication, satisfaction about health care services, and attitudes to modern medication may also factors that reinforce self-medication although these factors were not examined in the current study.
- The responses were self reported and subjective (prone to social desirability bias).

8. Conclusion

The prevalence of self-medication in Gondar town was high and it was growing through time. Therefore, this study shows that self-medication a public health problem in Gondar town.

Those, age group of 25 – 44, divorced, widowed, house wives, longer duration of illness, presence of chronic illness, perceived severity of illness, and good perceived general health status are related to a higher likelihood of the practice of self-medication.

Lower educational level (no formal education, primary education and secondary school) showed negative association.

9. Recommendations

NGO's, Gondar town health office and other concerned bodies

- It is important to exercise behavior modification programs directed at reducing the practice of self-medication on the higher education institutes.

To researchers

- Further research is needed with enlarge the study, include other populations and additional independent variables.

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Annexes

I. Information sheet and consent form

Title of the project: - Prevalence and its associated factors of self-medication in Gondar, Ethiopia

Name of Principal Investigator: Yohannes Andargachew (B.Pharma)
Name of Advisors: Dr. Getahun Asres (MD, MPH, DTM&H) and Alemayehu Shimeka (BSC, MPH)
Name of the Sponsor: Self
Name of Organization: University of Gondar, College of Medicine and Health Sciences, Institute of Public Health

Introduction

This information sheet and consent form is prepared to explain the research project that you are asked to join by a group of research investigators. The main aim of this research project is to determine prevalence and associated factors of self-medication in Gondar, Ethiopia. The research team includes a final year Epidemiology and biostatistics MPH student and two senior advisors from University of Gondar, institute of Public health.

Purpose of the research project:

The aim of this project is to measure prevalence and to identify associated factors of self-medication within adult ill residents of Gondar town. The information from your response will be used to develop different strategies that help to improve the proper use of modern and herbal medicines.

Procedure:

For this study a structured and pretested questionnaire will be used to interview the adult (age 16 and above). The study involves all ill individuals in the past two weeks. Since you fulfills the criteria, the team has selected you to be one of the study participants. If you are willing to participate, you are kindly requested to give your genuine response to the data collectors during interview.

Risk and Harm

By participating in this research project there is no risk or harm except dedication of 20 minute time to the data collectors.

Benefits:

You will not be provided any incentive or payment to take part in this project. But the indirect benefit of the research for the participant and all other clients in the program is clear. This is because if the program planners, the regulatory authorities and other concerned bodies aware the factors that influencing self-medication which may lead to different deleterious effects, it makes the intervention activity effective.

Confidentiality:

All Personal identifiers & personal information will not be taken rather code number will be used. The information collected from this research project will be kept confidential. Information will be accessed by the researcher and research assistants only.

Right to refusal or withdraw:

Participation in the study is voluntary and the decision not to participate in study will not affect you. You have also the full right to withdraw from this study at any time you wish without any penalty. If you have any questions during or after the interview feel free to ask for clarity and contact the investigators at the given address.

Person to contact:

This research project will be reviewed and approved by the ethical committee of university of Gondar. If you want to know more information and ask any questions at any time you went you can contact with the following address.

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ጥናቱን በተመለከተ መረጃ መስጫ ቅጽ

የጥናቱ ርዕስ፡- ህመምን ለማዳን የህክምና ባለሙያ ሳያዝ የሚወሰዱ መድኃኒቶች መጠንን እና ተያያዥ ምክንያቶች በጎንደር ከተማ

የአጥኚው ስም ፡- ዩሐንስ አንዳርጋቸው (የመጀመሪያ ዲግሪ በፋርማሲ)

የአማካሪዎች ስም፡- ዶ/ር ጌታሁን አስረስ

አቶ አለማየሁ ሽመካ

የጥናቱን ወጪ የሚሸፍነው፡- አጥኚው

ጥናቱን የሚያስጠናው ድርጅት፡- ጎንደር ዩኒቨርስቲ፤ የህክምናና ጤና ሳይንስ ኮሌጅ፤ የማህበረሰብ ጤና አጠባባቅ ተቋም

<u>መግቢያ</u>

ይህ መረጃ መስጫ እና የስምምነት መስጫ ቅጽ የተዘጋጀው እርስዎ እንዲሳተፉበት ስለተጠየቁት ምርምር ገለፃ ለማድረግ ሲሆን የምርምሩ ዋና አላማም በጎንደር ከተማ ስለአለው ህመምን ለማዳን ያለ ህክምና ባለሙያ ትዕዛዝ ስለሚወሰዱ መድኃኒቶች መጠንና ተያያዥ ምክንያቶች ነው፡፡ ይህ የምርምር ቡድን የኢፒዲሚዩሎጅ እና ባዮስታቲስቲክስ ኤም.ፒ.ኤች ተመራቂ ተማሪ እና ሁለት ልምድ ያላቸው የጎንደር ዩኒቨርስቲ መምህራን ይሳተፉበታል፡፡

<u>የጥናቱ ዋና አላማ</u>

የዚህ ጥናት ዋና አላማ ህመምን ለማዳን ያለ ህክምና ባለሙያ የሚወሰዱ መድኃኒቶች መጠንን መለካት እና ለዚህ ምክንያት የሆኑ ጉዳዮችን ለይቶ ማውጣት ነው፡፡ እርሰዎ በዚህ ምርምር ላይ የሚሰጡዋቸው መልሶች ዘመናዊ እና ባህላዊ መድኃኒቶችን በአግባቡ ለመጠቀም የሚረዱ እስትራቴጂዎችን ለማውጣት ይረዳል፡፡

<u>የጥናቱ ሂደት</u>

ይህ ጥናት የሚደረገው በአግባቡ በተዘጋጀ መጠይቅ ሲሆን ይህ መጠይቅ በመረጃ ሰብሳቢው ሰው እየተነበበ የሚሞላ ይሆናል፡፡ የጥናቱ ተሳታፊዎች ባለፉት ሁለት ሳምንታት ውስጥ ታመው የነበሩ ከ15 ዓመት በላይየሆነው ሰው እንዲመልስ ይሆናል፡፡ እርሰዎ የዚህን ጥናት መስፈርት አሟልተው ሲገኙ በጥናቱ ተሳታፊ እንዲሆኑ ይጠየቃሉ፡፡ ፍቃደኛ ከሆኑ ለሚጠየቁት ጥያቄዎች ትክክለኛ መልስ እንዲሰጡ በማከበር እጠይቃለሁ፡

<u>በጥናቱ ተሳታፊ ላይ ሊገጥሙ የሚችሉ ችግሮች</u>

በዚህ ጥናት ላይ በመሳተፍዎ በእርሰዎ ላይ ከ20 ደቂቃ እስከ 25 ደቂቃ ከማባከን ውጭ የሚመጣ ምንም አይነት ችግር አይኖርም፡፡

<u>በጥናቱ የሚገኝ ጥቅም</u>

በዚህ ጥናት ለመሳተፍዎ በቀጥታ ለእርሰዎ የሚከፈል ክፍያ ወይም ጉርሻ አይኖርም፡፡ ነገር ግን በተዘዋዋሪ መንገድ እርሰዎም ሆኑ ሌሎች በዚህ ጥናት ውስጥ መሳተፋቸው የሚኖረው ጥቅም ግልፅ ነው፡፡ ምክንያቱም ጥናት አድራጊዎቹ ፤ቁጥጥር የሚያደርጉ አካትላት፤ እንዲሁም ጉዳዩ የሚመለከታቸው በሙሉ በዚህ ምርምር ብዙ ጉዳት ሊያደርሱ የሚችሉትን ምክንያቶች ካወቁት ስኬታማ የሆነ መፍትሔ እንዲያገኙ ይረዳቸዋል፡፡

<u>የመረጃው ምስጥራዊነት</u> ከእርሰዎ የሚሰበሰበዉ መረጃ ምስጢራዊነቱ የተጠበቀ ነዉ፡፡ ስምዎ ወይም የእርሰዎን ማንነት ለመለየት የሚያስችል መረጃ አይጠየቁም፡፡ መረጃዉ የሚቀመጠዉ በምስጢራዊ ኮድ ነዉ፡፡ ጥናቱን ከሚሰሩት ሰዎች ዉጭ መረጃዉ ለማንም አይሰጥም፡፡ መረጃዉ ለታቀደለት ጥናት ብቻ ይዉላል፡፡

<u>የመውጣት/ የማቋረጥ መብት</u> በጥናቱ ያለመሳተፍ መብትዎ የተጠበቀ ነዉ፡፡ ማንኛዉንም መመለስ ያልፈለጉትን ጥያቄ ወይም ሁሉንም መመለስ ካልፈለጉ እንዲመልሱ አይገደዱም፡፡ ባለመመለስዎ በእርስዎም ሆነ በቤተሰብዎ የሚመጣብዎት ምንም ችግር የለም፡፡ ጥናቱን አቋርጦ መዉጣት ከፈለጉ ሙሉ መብትዎ የተጠበቀ ነዉ፡፡

<u>ተጨማሪ መረጃ ከፈለጉ</u> ይህ ጥናት በጎንደር ዩኒቨርሲቲ ህብረተሰብ ጤና አጠባበቅ ተቋም ተፈትሾ ተቀባይነቱ ጸድቋል፡፡ ጥያቄ ካለዎትና ተጨማሪ መረጃ ከፈለጉ በማንኛዉም ጊዜ ከዚህ በታች የተጠቀሱትን አድራሻዎች መጠቀም ይችላሉ፡፡

1. አቶ ዩሐንስ አንዳርጋቸው ሞባይል፡- 09-18-77-18-44
2. ዶ/ር ጌታሁን አስረስ ሞባይል፡- 09-11-06-66-75
3. አቶ አለማየሁ ሽመካ ሞባይል፡- 09-12-13-75-86

II. Questionnaires

University of Gondar

College of Medicine and Health Science

Institute of Public Health

Questionnaire to determine the prevalence and associated factors of self-medication in Gondar town, Ethiopia

(Interviewer: Please read the following statement to the respondent before you begin interviewing.)

Hello! I am……..., I am working with Yohannes Andargachew, MPH student in the University of Gondar, Institute of Public Health. I am one of the data collectors. I am here to gather information about the magnitude of self-medication and its associated factors in Gondar town. Would you please cooperate in responding to the following questions? Your participation may indirectly contribute to improve the problem behind the practice of self medication and inappropriate self medication results in wastage of resources, increase resistance of pathogen and other deleterious effect.

Your response will never be exposed to any party. And without your consent, there is no obligation to participate in the study. You have the full authority to refuse participation, refrain during interview or decline from answering to some or more of the questions you do not like to answer.

Are you willing to participate?

Consent given…… Continue with the interview

Consent not given……. thanks and go to the next

(Interviewer: Please mark in the space provided to confirm respondent's permission).

Guidelines to the column of the questionnaire

The table below is a brief guide to each of the column in the questionnaire

Column	Description	Remark
Number	This question reference number is design to help interviewers find their place if interrupted	
Question	Each questions is to be read to the participants	
Response	This column list the available response options which the interviewer will be circling or filling the text boxes. The skip instructions are shown on the right hand side of the responses and should be carefully followed during interviews.	
Code	The column is design to match data from the instrument into the data entry tool, data analysis syntax.	This should never be changed or removed

Interviewer Name:- _____ _____

Date of completion of the questionnaire | | | | | | | |

dd mm yy

Participant identification number | | | | | | | |

Section A: socio-demographic related questions			
Number	Questions	Response	Code
1.	Sex	1. Male 2. Female	A1
2.	Age (in years)	----------	A2
3.	The highest level of education completed	_____	A3
4.	Religion	1.Orthodox 2. Muslim 3. Protestant 4. Catholics 5.Others	A4
5.	Ethnicity	1.Amhara 2.Tigrie 3.Oromo 4. Others	A5
6.	Current Marital status	1.. Single 2. Married 3. Divorce 4. Widowed	A6
7.	Current occupation	1. Student 2. Self-employed 3. Government employees 4. Housewife 5. Others	A7

Section B: About self medication practice			
8.	What was the measure taken by persons who	1. Treatment in Health Institution 2. Treatment by modern drugs without consulting health practitioner 3. Treatment using Home-made Remedy	B1

	reported an illness?	4. Treatment by Traditional Healer 5. No action taken 6. Others specify……	
9.	If did not select option 1 for the above question, why you did not go to the health institution?	1. No time 2. The health institution is too far 3. Previous good experience with the drug 4. Financial constraints 5. Urgency of the problem 6. Advice from friend (who is not medical practitioner) 7. Long delays at health institutions 8. Drugs are easily obtained 9. Expectation of less/no benefit from modern health care 10. Others specify……	B2

Section C: Medical factors related questions			
10.	How long is the duration of illness before seeking self-medication/ consult health practitioner (in days)?	_____	C1
11.	How is/was the perceived severity of illness?	1. High 2. Medium 3. Low	C2

12.	Which of the following disease doctor ever told you that you have?	1. Heart disease 2. Hypertension 3. Diabetics 4. Cancer 5. Stroke 6. Asthma 7. gastritis or ulcer 8. Other specify……..	C3
13.	What would you say about your general health status?	1. Very good 2. Medium 3. Poor	C4

Section D: Medical care facilities related question			
14.	How far is the nearest health care facility from your home?		D1

Section E: Wealth index of households related questions					
15.	Monthly income	In Birr	_____		E1a
16.	How many family members are there in your house?	Number of family members	_____		E1b
17.	Does your				E1c

	household have the following?	Electricity Radio Television Telephone landline Telephone mobile Refrigerator	Yes 1 1 1 1 1 1	No 2 2 2 2 2 2	
18.	What type of fuel does your household mainly use for cooking?	Electricity Kerosene Charcoal Firewood, straw Dung Other	Yes 1 1 1 1 1 ————	No 2 2 2 2 2	E1d
19.	Occupation	Employed Unemployed	1 2		E1e
20.	Does any member of this household have an account with a bank/credit association/micro finance?	Yes No	1 2		E1f
21.	Which of the following animals does this	Type of animals Cows/oxen/bulls	Yes 1 1	No 1 1	E1g

	household own	Horses/donkeys/mules Goats and Sheep Chickens	1 1	1 1	
22.	Do you have your own private home?	Yes No	1 2 ⟶ skip to 24		E1h
23.	If yes to the above question, what is the material that your house is made of?	Concrete and cement Wood and mud Other specify	1 2		E1i
24.	Do you have your own farm?	Yes No	1 2		E1j

Section F: - Knowledge of medicine related questions

25.	Do the following characteristics affect the action of a medicine in the body? 1. Shape of a tablet 2. Color of a tablet	Yes 1 1	No 2 2	F1a
26.	Can a particular medicine exist in more than one form (e.g in tablet form, in the form of syrup, and in the form of injection)?		1. Yes 2. No	F1B
27.	Can a form containing a particular medicine have		1. Yes	

	more than one name?		2. No	F1C
28.	Is it important to ask the following questions to the physicians or pharmacist when you tell him/her about your health problem? A. Whether you are taking any other medicine B. Whether you are allergic to any medicine	Yes 1 1	No 2 2	F1d
29.	Can alcohol drinking affect how a medicine works in the body?		1. Yes 2. No	F1e
30.	Does a pregnant women need to ask a physicians advice before taking medicine?		1. Yes 2. No	F1f
31.	Sick children are given the same medicine as adults		1. Yes 2. No	F1g
32.	Whether the following medicine cause harm if too much of them is taken A. Vitamins B. Paracetamol C. Cough medicines	Yes 1 1 1	No 2 2 2	F1h
33.	Do some medicines have to be kept in the refrigerator?		1. Yes	F1i

		2. No		
34.	If the physician prescribes an antibiotics 4 times a day for a total of 5 days, what would you do if you start feeling better 3 days?	1. Stop taking the medicine completely 2. Continue taking the medicine but less than 4 times a day 3. Continue taking the medicine 4 times a day for 5 days		F1j
35.	Do heat and direct sunlight damage medicine?	1. Yes 2. No		F1k
36.	Which questions you should ask the physicians if he/she suggest you need to take a new medicine?	Yes	No	
	A. What does the medicine do?	1	2	F1l
	B. For how long will I take?	1	2	
	C. How and at what time should I take?	1	2	
	D. What are the possible problems caused by the medicine and what should I do if I get one?	1	2	
	E. What should I do in case I forgot the take the medicine?	1	2	

ጎንደር ዩኒቨርሲቲ
ህክምና እና ጤና ሳይንስ ኮሌጅ
የሕብረተሰብ ጤና አጠባበቅ ተቋም

አማርኛ ቃለ-መጠይቅ

ህመምን ለማዳን የህክምና ባለሙያ ሳያዝ የሚወሰዱ መድኃኒቶች መጠንን እና ተያያዥ ምክንያቶች በተመለከተ በጎንደር ከተማ ላይ ለመዳሰስ የተዘጋጀ መጠይቅ.

ጤና ይስጥልኝ

ስሜ _____ የሚባል ሲሆን ወደዚህ የመጣሁት በጎንደር ዩኒቨርስቲ የህክምናና ጤና ሳይንስ ኮሌጅ የማህበረሰብ ጤና ተቋም የድህረ ምረቃ ሁለተኛ አመት ተማሪ የሆኑት አቶ ዩሐንስ አንዳርጋቸው በጎንደር ከተማ ህመምን ለማዳን ያለህክምና ባለሙያ የሚወሰዱ መድኃኒቶችን መጠን እና ተያያዥ ምክንያቶች ላይ ለሚያደርጉት ጥናት/ምርምር/ መረጃ ለመሰብሰብ ነው፡ ፡ የእርሰዎ በዚህ ጥናት መሳተፍ በተዘዋዋሪ መንገድ በጥናቱ ርዕሰ ጉዳዩች ላይ ያሉ ችግሮች እንደ ሀብት ብክነት፤ መድኃኒቶችን የተላመዱ በሽታዎች መስፋፋት፤ እንዲሁም ሌሎች ያለ ህክምና ባለሙያ መድሀኒቶችን በመውሰድ ምክንያት የሚመጡ ችግሮችን በመለየት መፍትሔ ለመፈለግ የሚረዳ ነው፡፡ በእርሰዎ የሚሰጡ መልሶች በሙሉ ሚስጥራዊነቱ የተጠበቀ ሲሆን ፈቃደኛ ካልሆኑ የሚያስገድድዎት አካል አይኖርም፡፡ በጥናቱ መሳተፍ፤ መሀል ላይ መቋረጥ ወይም የተወሰኑ ጥያቄዎችን ያለመመለስ መብት አለዎት፡፡

ለመሳተፍ ፈቃደኛ ነዎት?

አዎ ፈቃደኛ ነኝ ---------- (ቃለ መጠይቁን ይጀምሩ)

ፍቃደኛ አይደለሁም ---------- (ወደ ቀጣዩ ተሳታፊ ይሒዱ)

(ቃለ መጠይቅ አድራጊ እባክዎ ፍቃደኛ መሆነቸውና አለመሆናቸውን በተሰጠው ክፍት ቦታ ምልክት ያድርጉ)

<u>የመጠይቁ ረድፍ አጠቃቀም መመሪያ</u>

ከታች ያለው ሰንጠረዥ አጠር ያለ ስለ መጠይቁ አጠቃቀም መመሪያ ነው

ረድፍ	ገለፃ	ምርመራ
ተራ ቁጥር	ይህ ቁጥር ቃለ መጠይቁን የሚያደርገው ያለበት ጥያቄ ቢጠፋው መልስ ለማግኘት የሚረዳው ነው	
ጥያቄ	እያንዳንዱ ጥያቄ ለጥናቱ ተሳታፊ መነበብ አለበት	
መልስ	ይህ ረድፍ ተሳታፊው ሊመልሳቸው ይችላል ተብለው የታሰቡ መልሶችን የያዘ ነው፡፡ መጠይቁን የሚሞላው ሰው የመልሱን ተራ ቁጥር ማክበብ ወይም በተሰጠው ክፍት ቦታ መልሱን መፃፍ አለበት ወደ ጥያቄ ቁጥር ____ ሂድ የሚሉት መመሪያዎች በጥንቃቄ መከተል ይኖርበታል፡፡	
ኮድ	ይህ ረድፍ መረጃውን ለማቀናበር እና ለመተንተን ታስቦ የተሰጡ ኮዶችን የያዘ ነው፡፡	ኮዶች በምንም አይነት ምክንያት ሊቀየሩ አይገባም፡፡

መረጃውን የሰበሰበው ስም _____ ፊርማ _____ቀን

/ /

የተቆጣጣሪው ስም _____ ፊርማ _____ቀን

/ /

መጠይቁ የተሞላበት ቀን | | | | | | |

ቀን ወር ዓ.ም

የተሳታፊ መለያ | | | | | | | ቁጥር

ክፍል ሀ	አጠቃላይ ማህበራዊ ነክ መረጃዎች		
1.	ፆታ	1. ወንድ 2. ሴት	A1
2.	ዕድሜ(በአመት)	_____	A2
3.	የትምህርት ደረጃ	_____	A3
4.	የየትኛው ሀይማኖት ተከታይ ነዎት?	1. አርቶዶክስ 2. እስልምና 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ካለ ይጠቀስ _____	A4
5.	ከየትኛው ብሄር ነዎት?	1. አማራ 2. ትግሬ 3. አሮሞ 4. ሌላ ካለ ይጠቀስ _____	A5
6.	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ	A6

		3. አግብቶ የፈታ 4.የትዳርአጋሩ/ሯ የሞተበት/ባት	
7.	የምትሰራው ስራ አይነት	1. ተማሪ 2. ስራ ፈላጊ 3. የግል ሰራተኛ 4. የመንግስት ሰራተኛ 5. የቤት እመቤት 6. ሌላ ካለ ይገለፅ…….	A7

ክፍል ለ ያለ ህክምና ባለሙያ ህመምን ለማዳን ስለተወሰዱ መድኃኒቶች መረጃዎች			
8.	ከህመሙ ለመዳን የወሰድከው/ሽው እርምጃ ምንድን ነበር?	1. ወደ ጤና ተቋም በመሄድ ህክምና አደረኩ 2. ከፋርማሲ ወይም ከመድኃኒት መደብር መድኒት ገዝቼ ወሰድኩ 3. የባህል መድኃኒት ከቤት አዘጋጅቼ ወሰድኩ 4. ከባህል መድኃኒት ባለሙያ በመሄድ መድኃኒት ወሰድኩ 5. ምንም አላሰረኩም 6. ሌላ ካለ ይገለፅ…….	B1
9.	ለላይኛው ጥያቄ አማራጭ 1ን ካልመረጡ፤ ለምንድን ነው ወደ ጤና ጣቢያ ያልሄዱት?	1. ጊዜ ስለሌለኝ 2. ጤና ጣቢያው በጣም ሩቅ ስለሆነ 3. ስለመድኃኒቱ ጥሩነት ከዚህ በፊት ልምድ ስለነበረኝ 4. ገንዘብ ስለሌለኝ 5. ህመሙ አጣዳፊ ስለነበር 6. ከጓደኛ ባገኘሁት ምክር (የጤና ባሙያ ያልሆነ) 7. በጤና ጣቢያ አገልግሎት ለማግኘት ረጅም ጊዜ ስለሚወስድ 8. መድኃኒቶች በቀላሉ ስለሚገኙ 9. ህክምና ጥቅም ይኖረዋል (ያድነኛል) ብዬ ስለማላምን 10.ሌላ ካለ ይጥቀሱ……	B2
ክፍል ሐ የጤና ነክ ጉዳይ መረጃዎች			

10.	ለህመምህ/ሽ መፍትሄ ያለከውን/ሽውን ከማድረግህ/ሽ በፊት ለምን ያህል ጊዜ ታመምክ/ሽ (በቀን)?	_____	C1
11.	የህመሙ ክብደት እንዴት ነበር?	1. ከባድ 2. መካከለኛ 3. ቀላል	C2
12.	ከዚህ በፊት የህክምና ባለሙያ ከተጠቀሱት በሽታዎች የትኞቹን እንዳለብዎት ተነግሮዎት ያውቃል?	1. የልብ በሽታ 2. የደም ግፊት 3. የስኳር በሽታ 4. ካንሰር 5. ስትሮክ 6. የጨጓራ በሽታ 7. የአስም በሽታ 8. ሌላ ካለ ይገለፅ……	C3
13.	አጠቃለይ የጤንነትዎን ደረጃ በምን ይገልፁታል?	1. በጣም ጥሩ 2. ጥሩ 3. ደካማ	C4
ክፍል መ የጤና ተቋማትን በተመለከተ			
14.	ለቤትዎ ቅርብ የሆነ የጤና ጣቢያ ከቤትዎ በሜትር ምን ያህል ይርቃል?		D1

ክፍል ሠ ከሀብት ጋር የተያዙ ጥያቄዎች (ለከተማ ነዋሪዎች)					
15.	የወር ገቢ	ብር	_____		E1a
16.	በሚኖሩበት ቤት ውስጥ ስንት የቤተሰብ አባል ይገኛል ?	የቤተሰብ ብዛት	_____		E1b
17.	በቤትዎ ውስጥ የሚከተሉት ይገኛሉ?	ኤሌክትሪክ ራድዮ ቴሌቪዥን	አለ 1 1	የለም 2 2	E1c

		የመስመር ስልክ ተንቀሳቃሽ ስልክ ማቀዝቀዣ	1 1 1 1	2 2 2 2	
18.	በቤትዎ ውስጥ በአብዛኛው ለማብሰያነት የሚጠቀሙት የትኛውን ነው ?	ኤሌክትሪክ ነጭ ጋዝ ከሰል እንጨት ኩበት ሌላ ካለ ይጥቀሱ	አለ 1 1 1 1 1 ---------	የለም 2 2 2 2	E1d
19.	ስራ	ተቀጣሪ ሥራ ፈላጊ	1 2		E1e
20.	ከቤተሰብ አባላት ውስጥ በባንክ/ በብድርና ቁጠባ/በአነስተኛ የገንዘብ ተቋማት ሂሳብ ያለው አለ?	አለ የለም	1 2		E1f
21.	የትኞቹ የቤት እንስሳት በቤታችሁ ውስጥ ይገኛሉ?	ላሞች/በሬዎች/ወይፈኖች ፈረሶች/በቅሎች/ ፍየሎች/በጎች / ዶሮዎች	አለ 1 1 1 1	የለም 2 2 2 2	E1g
22.	የግል ቤት አለዎት ?	አዎ የለኝም ***መልሰዎ የለኝም ከሆነ ወደ ጥያቄ 24 ይለፉ***	1 2		E1h
23.	ቤትዎ የተሰራው ከምንድነው ?	ከአርማታና ሲሚንቶ ከጭቃና እንጨት ሌላ ካለ ይጥቀሱ	1 2 _____		E1i
24.	የግል እርሻ አለዎት?	አዎ የለኝም	1 2		E1j

ረ. የመድሀኒት እውቀት ጋር ተያያዥነት ያላቸው ጥያቄዎች				
25.	ከሚከተሉት የመድሃኒት ባህሪ በሰውነት ውስጥ በመድሀኒቱ ስራ ላይ ተጽዕኖ የሚያሳድረው የቱ ነው ሀ.የመድሃኒቱ ቅርጽ ለ.የመድሀኒቱ ቀለም	1. አዎ 1. አዎ	2.የለም 2.የለም	F1
26.	አንድ መድሃኒት በተለያየ አይነት(ለምሳሌ በታብሌት፤ በሽሮፕ ወይም በመርፌ መልክ)ሊኖር ይችላል	1. አዎ 2. የለም		F2
27.	ተመሳሳይ ይዘት ያለው አንድ መድሀኒት ከአንድ በላይ ስም ሊኖረው ይችላል	1. አዎ 2. የለም		F3
28.	የሚከተሉትን ጥያቄዎች ለሀኪመዎ ወይም ለፋርማሲ ባለሙያ ስለጠየናዎ ችግር ሲናገሩ አብሮ መናገር ያስፈልጋል ሀ.ሌላ መድሀኒት እይወሰዱ መሆኑንና አለመሆኑን ለ.አለርጅክ ስለሆነብዎ የመድሀኒት ዓይነት	አዎ 1 1	የለም 2 2	F4
29.	አልኮል መጠጣት መድሃኒት በሰውነት ውስጥ በሚሰራው ስራ ላይ ተጽዕኖ ያሳድራል	1. አዎ 2. የለም		F5
30.	አንዲት እርጉዝ ሴት መድሀኒት ከመውሰዷ በፊት የህክምና ባለሙያ ምክር መጠየቅ አለባት	1. አዎ 2. የለም		F6
31.	የታመሙ ህጻናት የሚሰጣቸው መድሀኒት አዋቂ ሰው ከሚሰጠው ጋር ተመሳሳይ ነው	1. አዎ 2. የለም		F7
32.	የሚከተሉትን መድሀኒት ከመጠን በላ መውሰድ ጉዳት ያስከትላል ሀ. ቫይታሚን ለ. ፓራሲታሞል ሐ. የሳል መድሀኒቶች	አዎ 1 1 1	የለም 2 2 2	F8
33.	አንዳንድ መድሀኒቶች መቀዝቀዣ (ፍሪጅ)ውስጥ ይቀመጣል	1. አዎ 2. የለም		F9
34.	የህክምና ባለሙያ በቀን 4 ጊዜ ለ5 ቀን መድሀኒት እንዲዎስዱ ቢያዝለዎት ፤እርስዎ ግን በ3ኛው ቀን ቢሻልዎ ምን ያደርጋሉ?	ሀ. መድሀኒት መውሴን አቋርጣለሁ ለ. እስከ 4ኛው ቀን ወስጀ ከዚያ በኋላ አቋርጣለሁ ሐ. እስከ 5ኛው ቀን በቀን 4ጊዜ መድሀኒቴን መውሰዴን		F10

		እቀጥላለሁ		
35.	ሙቀትና ቀጥታ የሆነ የጸሃይ ጨረር መድሀኒት ላይ ጉዳት ያደርሳሉ	1. አዎ 2. የለም		F11
36.	ሀኪመዎ አዲስ መድሀኒት ቢያዝለዎት መጠየቅ የሚገባው መረጃዎች የትኞቹ ናቸው ሀ. መድሀኒቱ የሚሰራው ምንድን ነው ለ. ለምንያህል ጊዜ ነው መድሀኒቱን የምወስደው ሐ. መቸ መቸ ነው መድሀኒቱን የምወስደው መ. በመድሀኒቱ ምክንያት ሊመጡ የሚችሉ የጎንዮሽ ጉዳቶች እነማን መሆናቸውን እና አንዱ ቢከሰት ምን ማድረግ እንዳለብኝ ሠ. መድሀኒቱን ባጋጣሚ ሳልወስድ ብቀር ምንማድረግ እንዳለብኝ	አዎ 1 1 1 1 1	የለም 2 2 2 2 2	F12

Declaration

I, the undersigned, senior MPH student declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Master of Public Health.

Name: Yohannes Andargachew

Signature: _____

Place of submission: Institute of Public Health, College of medicine and Health Sciences, University of Gondar.

Date of Submission: 02/06/2014

This thesis work has been submitted for examination with our approval as university advisors.

Advisors

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